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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,256	04/09/2001	Jeffrey Dinkel	DINK1	7582

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TROUTMAN SANDERS LLP  
BANK OF AMERICA PLAZA, SUITE 5200  
600 PEACHTREE STREET, NE  
ATLANTA, GA 30308-2216

EXAMINER

A, PHI DIEU TRAN

ART UNIT	PAPER NUMBER
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3637

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/829,256

Applicant(s)

DINKEL, JEFFREY

Examiner

Phi D A

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 and 36-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 36-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3, 8-9, 13-16, 18, 36, 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (01/0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu (figure 9) discloses a prefabricated construction element having a core (10) having an upper principal surface and a lower principal surface, alkaline resistance fiber to be used with a Portland cement, having additive of expanded shale (col 10 line 3 third paragraph), a pervious upper reinforcement material on the upper principal surface of the core, a cement slurry binding the reinforcement layer on the upper surface of the core, an upper coating/cement slurry in communication with the upper principal surface of the core and the pervious upper reinforcement material, the layer comprising a fiberglass mesh with an alkaline resistant coating selected from the group consisting of woven fiberglass and fiberglass skim.

Mathieu does not show the core having alkaline resistance fiber, and an impervious membrane remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength, the membrane being a polymer membrane.

Fahmy (col 2 lines 53-58) discloses an impervious polymer membrane (22) remaining on the lower principle surface of the core (20) after the manufacture of the element to act as a water vapor barrier.

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Dinkel discloses fiber in the core to reinforce the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu to show the core having alkaline resistance fiber, and an impervious membrane on the lower principle surface of the core after the manufacture of the element because fiber would reinforce and strengthen the core as taught by Dinkel, and having an impervious membrane on the lower principle surface of the core after the manufacture of the element would provide a water vapor barrier to the construction element while allowing water vapor to escape as taught by Fahmy

2. Claims 2, 7, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu as modified shows all the claimed limitations except for the fiber being chopped reinforcement fibers randomly dispersed in the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu's modified structure to show the fiber being chopped reinforcement fibers randomly dispersed in the core because using chopped fibers randomly distributed on a core to reinforce a core is well-known in the art as it provides high strength to the core while maintaining low distribution cost.

3. Claims 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu as modified by Dinkel shows all the claimed limitations except for the membrane being a spunbonded olefin, alkaline resistant dense polymer fiber mat, Tyvek, or the membrane having waterproof paperboard.

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Fahmy discloses the membrane being conventionally known "breathable" resins made from polyesters, polyurethanes, acrylic polymers, polyethers, ester-ether copolymers, and the like as well as blends and copolymer thereof.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu's modified structure to show the membrane being a reinforced polymer membrane, spunbonded olefin, alkaline resistant dense polymer fiber mat, Tyvek, or the membrane having waterproof paperboard because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

4. Claims 4-6, 10-12, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu as modified shows all the claimed limitations except for the membrane being a spunbonded olefin, alkaline resistant dense polymer fiber mat, or the membrane having waterproof paperboard.

Fahmy discloses the membrane being conventionally known "breathable" resins made from polyesters, polyurethanes, acrylic polymers, polyethers, ester-ether copolymers, and the like as well as blends and copolymer thereof.

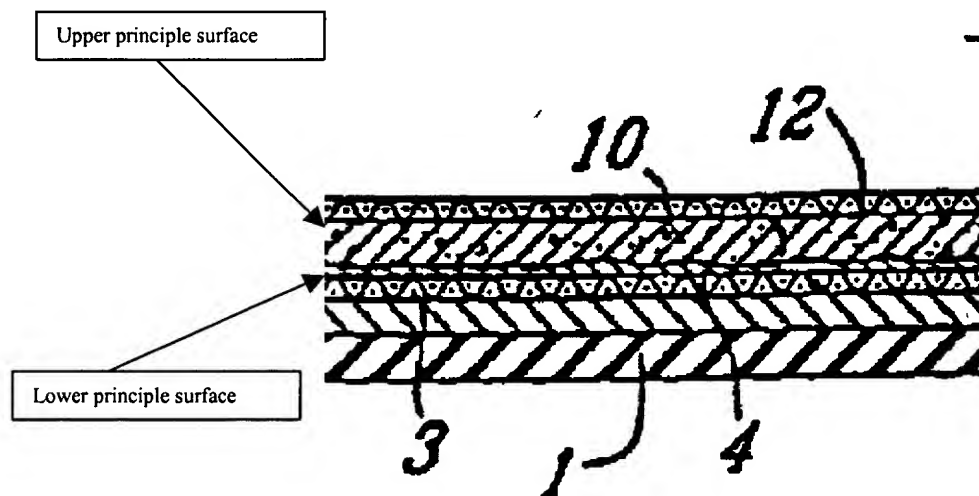
It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu's modified structure to show the membrane being a reinforced polymer membrane, spunbonded olefin, alkaline resistant dense polymer fiber mat, or the membrane having waterproof paperboard because it has been held to be within the general skill

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of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

5. Claims 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu (figure 9) discloses a prefabricated asymmetrical construction element (see below) having a core (10) having an upper principal surface and a lower principal surface, the element being asymmetrical in design such that a layer or layers on the upper principle surface differ in arrangement from the layer or layers on the lower principle surface (inherently so as the lower surface include the slurry cement layer), the upper principle and the lower principle surface of the core having different moisture-resistant layers respectively (inherently per the slurry cement layer), the different moisture resistant layers having different moisture resistant properties.



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Mathieu does not show an impervious membrane remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength.

Fahmy (col 2 lines 53-58) discloses an impervious polymer membrane (22) remaining on the lower principle surface of the core (20) after the manufacture of the element to act as a water vapor barrier.

Dinkel discloses fiber in the core to reinforce the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu to show the core having alkaline resistance fiber, and an impervious membrane remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength because fiber would reinforce and strengthen the core as taught by Dinkel, and having an impervious membrane on the lower principle surface of the core after the manufacture of the element would provide a water vapor barrier to the construction element while allowing water vapor to escape as taught by Fahmy.

6. Claims 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu (figure 9) discloses a prefabricated asymmetrical cementitious panel(see figure 9 above) having a core (10) having an upper principal surface and a lower principal surface, a pervious upper reinforcement material (12) on the upper principal surface of the core, an upper coating/cement slurry in communication with the upper principal surface of the core, the panel being asymmetrical in design such that a layer or layers on the upper principle surface differ in arrangement from the layer or layers on the lower principle surface (inherently so as the lower

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surface include the slurry cement layer), alkaline resistance fiber to be used with a Portland cement.

Mathieu does not show an impervious membrane remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength.

Fahmy (col 2 lines 53-58) discloses an impervious polymer membrane (22) remaining on the lower principle surface of the core (20) after the manufacture of the element to act as a water vapor barrier.

Dinkel discloses fiber in the core to reinforce the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu to show the core having alkaline resistance fiber, and an impervious membrane remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength because fiber would reinforce and strengthen the core as taught by Dinkel, and having an impervious membrane on the lower principle surface of the core after the manufacture of the element would provide a water vapor barrier to the construction element while allowing water vapor to escape as taught by Fahmy.

7. Claims 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu as modified shows all the claimed limitations except for the fiber being chopped reinforcement fibers randomly dispersed in the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu's modified structure to show the fiber being chopped reinforcement



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fibers randomly dispersed in the core because using chopped fibers randomly distributed on a core to reinforce a core is well-known in the art as it provides high strength to the core while maintaining low distribution cost.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-19,36-51 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art shows different cementitious panel designs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phi D A whose telephone number is 703-306-9136. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on 703-308-2486. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phi Dieu Tran A

5/3/04